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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,458	09/30/2003	Shui Huang	9776-US-PA	2457

31561 7590 12/22/2004

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER	
NGUYEN, THANH NHAN P	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/605,458	HUANG ET AL.	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7-9, 11-13, 15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Ono et al U.S. Patent No. 5,847,781.

Referring to claims 5, Ono et al discloses a pixel structure on a transparent substrate, the pixel structure comprising: a scan line (GL) over the transparent substrate (SUB1); a gate insulation layer (GI) over the transparent substrate covering the scan line; a data line (DL) over the gate insulation layer, wherein the data line extends in a direction perpendicular to the direction of extension of the scan line; a shelling layer (SKD) over the transparent substrate on each side of the data line; a dielectric layer (AS) between the data line and the gate insulation layer above the shelling layer; a thin film transistor (TFT) over the transparent substrate, wherein the thin film transistor has a gate electrode, a channel layer and a pair of source/drain terminals, wherein the source terminal is electrically connected to the data line, the gate electrode is electrically connected to the scan line and the channel layer is formed over the gate insulation layer above the gate electrode; a passivation layer (PSV1) over the transparent

substrate covering the thin film transistor and the data line; a contact (CN) within the passivation layer; and a pixel electrode (ITO1) over the transparent substrate, wherein the pixel electrode and the drain terminal are electrically connected through the contact, [see figs. 1-3].

Referring to claim 7, Ono et al discloses the shelling layers on each side of the data line are electrically connected, [see fig. 1].

Referring to claim 8, Ono et al discloses the shelling layer further includes a shelling section over the transparent substrate on each side of the data line; and a connective section over the transparent substrate, wherein the connective section joins up the shelling section on each side of the data line electrically, [see fig. 1].

Referring to claim 9, Ono et al discloses the shelling layer includes a block of shelling metallic layer that crosses from one side of the data line to the other, [see col. 2, line 16; and fig. 1].

Claim 1 is met the discussion regarding claim 5 rejection above.

Claim 2 is met the discussion regarding claim 8 rejection above.

Claim 3 is met the discussion regarding claim 9 rejection above.

Claims 11-13 are met the discussion regarding claims 1-3 rejection above respectively.

Claims 15, 17-19 are met the discussion regarding claims 5, 7-9 rejection above respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 6, 10, 14, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al in view of Nakagawa et al U.S. Patent No. 6,525,788.

Referring to claims 4 and 10, Ono et al discloses the shelling layer (SKD) and the scan line (GL) are fabricated using an identical material, [see col. 6, lines 17-18]. However, Ono et al lacks disclosure of the shelling layer and the gate electrode are fabricated using an identical material.

Nakagawa et al discloses the shelling layer (floating electrode – serves as light shielding layer) using the same material as that for the gate electrode for improving the aperture ratio of the pixels, [see Abstract; and col. 1, lines 22-25]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the shelling layer, the gate electrode and the scan line are all fabricated using an identical material for the benefit of

improving the aperture ratio of the pixels, and having no substantial steps increase in the manufacturing process results.

Referring to claim 6, even though Ono et al lacks disclosure of the dielectric layer, in this manner, includes a silicon nitride layer. It was conventional at the time to use silicon nitride layer as dielectric layer, and therefore had the benefits associated with being conventional, such as the benefit of being available and the benefit of being suitable for the intended purpose. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the dielectric layer includes a silicon nitride layer for the benefit of being available and being suitable for the intended purpose.

Claim 14 is met the discussion regarding claim 4 rejection above.

Claim 16 is met the discussion regarding claim 6 rejection above.

Claim 20 is met the discussion regarding claim 10 rejection above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ono et al U.S. Patent No. 5,847,781 discloses a pixel structure comprising a shelling layer positioned on each side of the data line being electrically connected; further comprising a dielectric layer between the data line and the gate insulation layer above the shelling layer.

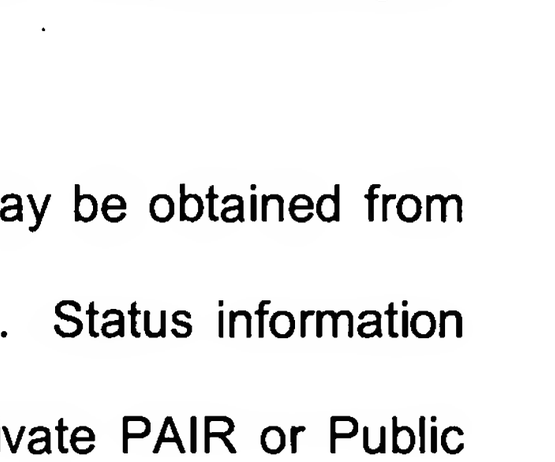
Nakagawa et al U.S. Patent No. 6,525,788 discloses the shelling layer using the same material as that for the gate electrode.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
Art Unit 2871



KENNETH PARKER
PRIMARY EXAMINER